



ANA **GRAMPAW PETTIBONE**  
**SQUADRON** INC.

**1 FEBRUARY 2018**

[www.gpsana.org](http://www.gpsana.org)



Editor Hal McDonnell

The Grampaw Pettibone Squadron is a non-profit organization (IRS Sect. 501(C)(4) which, through meetings, discussions, speaker programs, and periodic field trips, serves to educate squadron members and the general public on the requirements of an adequate national defense, especially maritime aviation, which is essential to a free society, and to support the military professionals (active and reserve) responsible for many aspects of national defense. GPS also seeks to foster the strong pride, esprit, and fraternal bonds which exist among those associated with Naval Aviation.

## **THE GPS LUNCHEON MEETING**

WILL BE HELD ON

### **THURSDAY, 8 FEBRUARY 2018**

AT THE

## **GARDEN GROVE ELKS LODGE**

LOCATED AT 11551 TRASK Ave., GARDEN GROVE

Hangar doors open at 1130, Luncheon is at 1200, secure at 1330.

Please make reservations before 9 PM on Monday 5 February

COST IS \$18.00. FOR RESERVATIONS Please E-mail

[RayLeCompte34@Gmail.com](mailto:RayLeCompte34@Gmail.com) or by Phone: 562-287-4846

About our speaker's topic:



### **USS IOWA'S ANTI-AIRCRAFT OPERATIONS IN WWII**

During WWII, the decks of the USS IOWA bristled with anti-aircraft (AA) guns and hundreds of sailors to man them. IOWA provided essential AA support to



the fast fleet aircraft carriers as they took the war to Japan. Joe Hughes will introduce the three AA systems used on the IOWA, how these systems were deployed, and their effectiveness in combating the enemy threat from the skies.

About our speaker:

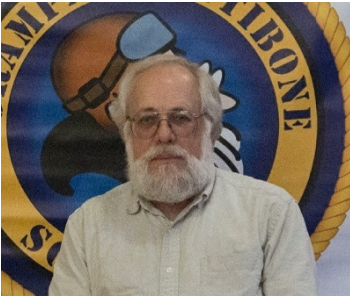
### **JOE HUGHES, RETIRED NORTHROP GRUMMAN MANAGER**

Mr. Hughes retired from **Northrop Grumman Corporation's Information Systems Sector** after 28 years of service in 2011. He managed naval weapon system projects early in his career and transitioned to managing larger computer network support departments and programs. Prior to joining Northrop Grumman, Mr. Hughes served in the U.S. Navy and was stationed aboard the USS Grand Canyon (AR-28) and the USS Texas (CGN-39). In addition to his duties as an Operations Specialist, Joe was a dual qualified Air Intercept Controller and an Anti-Submarine Air Control Specialist.

Since June of 2012 Mr. Hughes has been an active volunteer for the Pacific Battleship Center serving as a Tour Guide, newsletter editor and currently as the project manager for the Anti-Aircraft Aircraft (AAW) Exhibit Team. This project involves telling the story of the air war in the Pacific Theater from the battleship perspective as a part of the main body in aircraft carrier task groups in 1944 and 1945. Due to her modernization over her nearly 50 year career, Battleship IOWA is

left with few weapons or artifacts from this period and so the project is focused on acquiring samples of WWII vintage AAW guns and assembling multimedia displays to tell the air combat and defense story.

**JAN 11, 2018 LUNCHEON SPEAKER BRIEFING**  
**THE HISTORY OF US NAVY**  
**UAV DEVELOPMENT**  
**BETWEEN 1911-1945.**  
**BY DAVID L. MALMAD**



On Jan 11, 2018, David Malmad, the Squadron Public Affairs Officer was the speaker at the Grampaw Pettibone Squadron. David provided the audience with an overview of the history of US Navy UAV development between 1911-1945.

David opened his remarks by referencing current news reports and articles which referred to the existence and operation of aviation vehicles with such labels as; UAV, RPV, UAS, RC and Drones. He posed that the existence of such objects had a history that dated back far more than most realized, almost 170 years.

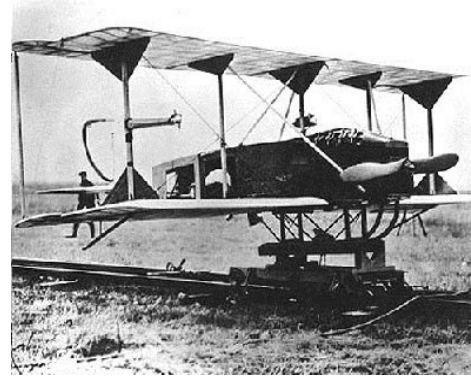
The reference to the 170 year history began when the Austrian military attempted to secure the surrender of the city and subdue resistance in the Austrian province of Venice. From 12 July to 22 August 1849, unmanned balloons armed with explosives were launched from an Austrian Navy vessel. Wind conditions resulted in the balloon moving past the city before detonation occurred. Subsequent attempts using a copper cable to transmit an electrical charge to the balloon were equally unsuccessful.

In 1863, Charles Perley registered a patent for an unmanned aerial bomber to aid the Union forces during the US Civil War. The design was a balloon where the basket opened with a timer to automatically release an explosive charge over a target. No records exist to indicate either a test or use under combat conditions occurred.

Inventors and their discoveries during the late 19<sup>th</sup> century contributed to the future of unmanned flight. The study of radio waves and creation of remote control devices by men like Nicola Tesla and Elmer Sperry's research into the gyrocompass and gyrostabilizer both in 1896 were samples of such achievements and subsequent contributions for unmanned flight.

Introduction of unmanned, automated and stable flight controls began to appear less than 9 years after the Wright Brothers first powered flight in 1903. Between 1911 – 1918, inventor Elmer Sperry conducted a series of tests initially with a production aircraft, the Curtiss N-9 seaplane. Sperry successfully demonstrated over 50 flights Aug-Oct 1913. In 1915, his son Lawrence Sperry joined the team and contributed his engineering knowledge. The addition of Dr

Peter Hewitt, who followed the design work of Nikola Tesla regarding radio remote control and Carl Norden, future developer of the Norden bombsight, provided support for enhancement of the gyrostabilizer.



Hewitt-Sperry Automatic Airplane

Initial tests of automated piloting and radio remote control were partially successful and the US Navy approved equipping six N-9 test aircraft in 1917 at a cost of \$200,000. The first test occurred Sept 1917 and by

November, a flight with a safety pilot onboard flew 30 miles, dropped a sand bomb within 2 miles of the target and returned. War footing commitments limited production aircraft usage and the new non-production test aircraft called the Sperry-Hewitt Automatic Airplane was only partially successful. Launch reliability and flight controls were not consistent for naval efforts and with the war ending in 1918, further testing was limited due to costs and resources.

At the same time testing was conducted for the Navy, Charles Kettering in 1918 was researching and built a less expensive test aircraft for the Army. Members of the project included, Lawrence Sperry and Jimmy Doolittle. The plane was to be equipped with a 40hp engine, a 15 foot wingspan and 50 mph speed, utilizing the Sperry gyro system. Initial tests experienced problems with the engine and remote control features. With the ending of the war, further research and development was reduced and eventually ended.

The early 1920s saw technology advances and by the mid-20s a successful development of a remote control aircraft was achieved when a US Naval Aircraft F5-L seaplane in September 1924 took off, flew to a target location some ten miles distance, returned and landed. Unfortunately upon landing the plane experienced a puncture in the pontoons and sank. Subsequent tests were not as successful and the project was suspended.

Our speaker continued to share his research on the early development of remote control aircraft. One of the primary roles for the aircraft was that of target planes for military training of artillery and naval gunnery crews. Historical records indicated in 1935, the U.S. CNO(Chief of Naval Operations) travelled to Great Britain and was invited to observe Royal Navy gunnery tests. The successful demonstration of a reusable de Havilland Gypsy Moth aircraft referred to as the 'Queen Bee' encouraged the CNO to share the results upon return to the U.S. . Returning to the U.S., direction was given by US Naval leadership to update studies and improve the equipment. Commander Delmar Fahrney was to lead the program beginning July 1936 and develop or equip four test aircraft with needed communication,

flight and remote control features. Initial work was assigned the Naval Aircraft Factory with the designation NT 'Drone'. The aircraft was to be equipped with the latest radio, navigation and remote control servo systems. Research suggests the name was chosen either because of the sound made by the new plane or out of respect for the information provided by the British 'Queen Bee'.

At the same time the 'NT' was being developed two Stearman-Hammond aircraft JH-1, were used for radio controlled development trials. After considerable testing and refinement of equipment with the JH-1 and Curtiss N2C-2 planes, a successful unmanned radio-controlled flight was made on 23 December 1937.

Takeoff and landing was controlled via a land-based radio set; for flight maneuvers, control was shifted to an airborne chase plane.

The success of this flight resulted in the aircraft being used as remote control naval aerial targets beginning in August 1938 against the USS Ranger(CV4), and a second test against the USS Utah (AG-16). During the test against the Ranger radio communication was lost with the drone and it crashed. The Ranger drone test were considered a success and also revealed the need for additional gunnery training. By 1939 the use of drones as aerial targets was greatly increased and eventually became routine. The inadequacy of our antiaircraft defense against a maneuvered target was revealed and resulted in accelerating the improvement of our fire-control equipment.

Target drone successes sparked revival of the aerial torpedo concept. The introduction of television in 1937 and the sharing of the technology between RCA and the US Navy resulted in the testing of a television camera in a drone in 1941. By 1942 a drone demonstration delivered a torpedo on a destroyer at a range of 20 miles from the control plane.

The Naval Aircraft Factory was directed to begin development and testing of a television camera equipped drone beginning in the spring of 1942. The aircraft that was developed called TDN-1, which stood for 'T'orpedo, 'D'rone and N'aval Aircraft Factory. It was equipped with two 220hp Lycoming engines, 48 foot wing span with a cruise speed of 145 mph and capable of carrying one 2,000 pound torpedo. The materials were non-strategic and the sub-contractor of one order not typically involved with the aircraft industry was the Brunswick-Balke-Collander, a bowling ball manufacturer.

Test results were successful and did meet operational requirements. The aircraft may also be credited a first US Naval achievement, in August 1943, remotely launched from a US aircraft carrier(USS Sable). The aircraft was considered too complicated to operate and exceeded operational budget limits. It was destined to continue in a support, testing and training role.



TDR-1

The aircraft replacing the TDN-1 was identified as the TDR-1 and would be manufactured by the Interstate Aircraft and Engineering Company. In keeping with non-strategic materials and

manufacturing support, the airframe was built by the Schwinn Bicycle Company and aircraft parts came from the Wurlitzer Musical Instrument Company. The aircraft would be powered by two non-military 230 hp Lycoming engines.

The first test flight of the TDR-1 did not occur until late 1943. As development of the TDR-1, a Grumman TBF Avenger as a control plane was added. The drone pilot operated a remote control system

in the rear seat which contained a 5" TV screen remotely viewing a TV camera in the nose of the drone and a telephone dial instrument. The telephone dial would control the movement of the TDR-1 drone unit by selected dial numbers transmitting a radio signal to control altitude, direction and bomb/torpedo release. The control pilot TV monitor would be connected by radio signal to the TV enclosed in the nose of the drone to identify route of flight and target objective.

On 18 March 1944, organization for deploying the TDR-1s to their operational location was turned over to the Special Air Task Force(SATFOR). In mid-April 1944, Special Task Air Group 1 (STAG-1) was staged for deployment under the SATFOR and sent to the island of Banika in the Russell Island chain of the South Pacific.

On 30 July 1944—called "D-day" in STAG One's official war diary—four TDR-1s flew a demonstration mission against a derelict Japanese freighter(Yamazuki Maru) beached near Cape Esperance on Guadalcanal. Three of them slammed into the target; two detonated as planned. Film of the assault was shown to Navy brass in Pearl Harbor, who granted permission to mount combat operations.

On 27 September 1944, four drones, each armed with a 2,000-pound bomb, flew 55 miles to Bougainville to attack an anti-aircraft battery the Japanese had established on a beached merchant vessel. One of the TDR-1s was lost at sea. A second crashed 30 yards astern of the gun emplacement, but the bomb failed to detonate. The third probably hit the port side of the ship. The fourth flew through flak to land dead-center on target and exploded.

Senior Naval leadership determined the armed drone program was not practical and moved to cancel the operation. Unit leadership was able to obtain a 30 day extension and in that time flew 46 aircraft where 37 reached their targets and 21 were successful. STAG One attacked gun installations, bridges, caves, a cargo ship, and a lighthouse. The standard technique was to fly the TDR-1 directly into the target, but on occasion the drone dropped bombs remotely.

Though the unit was dissolved and personnel reassigned, the concept of remotely controlled aircraft as a military option was proven, in spite of the lack of support.



## CO COLUMN

Tim Brown

Lance LeCompte has been the Webmaster for the Grampaw Pettibone Squadron website at [www.gpsana.org](http://www.gpsana.org) from day one. He created a very professional and polished site and then maintained it for about 8 years. He gave us a tool

for all of us to advertise GPS and announce to the world what we are doing on a monthly basis. I, for one, have been very proud to direct prospective members and speakers to go to our website to get more information about GPS. It has been a superlative tool for Cindy, Bill, Sel and me when we are trying to convince somebody to join or to come speak to our group. All thanks and praise goes to Lance. I am sad to say that Lance is being forced by the demands of his day job to pass the duties of GPS Webmaster to a capable replacement by the name of Viki Nazarian who will be updating the website for the first time this month. Lance, being the consummate gentleman and business person, is helping Viki during the transition. I just want to thank Lance for all of his hard work



over these many years. You made me (and GPS) look good to the world out there. All of the best to you and Thank You!

Do you know how many years Hal McDonnell has been editing the OpPlan? Neither do I. Ask Hal the next time that you talk to him. Just like the website, the OpPlan is a "tool" that GPS cannot do without. It tells all of the members what is going on with GPS and announces our next speaker. Cindy, Sel, Bill and I also use the OpPlan when we first meet a prospective member or speaker. It is the one thing that we can actually hand out when we first meet somebody. It is wonderfully produced and we cannot do without it. I want to thank Hal for his great work and the very professional product that he produces every month. He must be very proud of his handiwork, I really appreciate it and you, as members, should too. Perhaps you will take the time to thank Hal for all of his efforts and time that he puts into producing the OpPlan. And maybe, just maybe, you will thank him for his many, many years of service to GPS.

This month we will honor the Sailors of the Quarter for the Weapons Station and NMC. Always a fun occasion and it gives us a chance to talk to active duty personnel who are doing superlative work for us. I want to congratulate Bill Thompson for getting front page coverage, including photographs, of the SOQ awards program in 3 local newspapers. Great job Bill! And, congratulations to Dave Malmad, our PAO, who continues to get great coverage in the form of columns/articles in the *Wings of Gold* magazine. Nice work and thank you.

As I do in almost every one of my columns, I will end with a request that you attend our meetings whenever possible and that you seek out new members for GPS. Bring a guest with you when you attend a luncheon please.

## BEST OF THE BEST



L to R: Chaplain Bill Thompson, Command Senior--Chief Kirby Lee, Munitions Chief--Luis Flores, MN1 (SW/EXW) Garrett Schilz, MA1 Chance Beckford, Base Commander--CAPT Noel Dahlke, and Sel Ramsay, Membership Chair for GPS.

As the Seal Beach Naval Weapons Station Commander, Captain Noel Dahlke, thanked Grampaw Pettibone Squadron for their continuing support of the sailors at the base, he also noted that the sailors from the base who were being honored today fully deserved the title of "Sailor of the Year." He described both of them as "The Best of the Best." They were honored today with certificates and gifts from GPS and medallions provided by the USAA Insurance Company. The "Sailor of the Year" for the SB Naval Weapons Station is MA1 Chance A. Beckford. The "Sailor of the Year" for the Navy Munitions Command Pacific CONUS West Division Unit, Seal Beach is MN1(SW/EXW) Garrett J. Schilz. Both of these honorees have served in a number of commands before coming to Seal Beach.

Article by Bill Thompson

## The GREAT GUYS

Here are some of the Great Guys who have made contributions to Gramps in January. These guys and the members who attend the monthly luncheons are the ones who make possible Gramps' Sailor of the Quarter program. Gramps and his staff thank them all and hope to see your name here.

**Tim Brown, Peter Cherbak, David Franzen,  
Bob Fuhrmann, Marv Garrison, R A Johnson,  
Chris Kretsinger, Ray LeCompte, Rod Losey,  
Cindy Macha, Jim McMath, R. D. Miller,  
Don Pageler, Bill Pridemore, Rafi Rahaman,  
Chuck Stillwell and Larry Woodruff.**



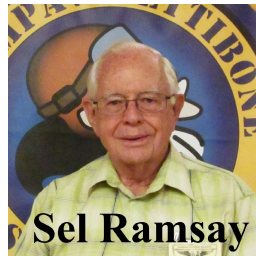
### FROM THE CHAPLAIN

Bill Thompson

We know February has Valentine's Day. Every store I've been in lately has reminders not to forget that day. On the other hand, wouldn't it be great to be thoroughly reminded that February also has Presidents Day which reminds us of two past

presidents. Why not pray with me a prayer attributed to *George Washington*: "**Almighty GOD**; we make our earnest prayer that Thou wilt keep the United States in Thy holy protection, that thou wilt incline the hearts of the citizens to cultivate a spirit of subordination and obedience to government; and entertain a brotherly affection and love for one another and for their fellow citizens of the United States of America at large. And finally that Thou wilt most graciously be pleased to dispose us all to do justice, to love mercy and to demean ourselves with that charity, humility and pacific temper of mind which were the characteristics of The Divine Author of our blessed religion, and without whose example in these things we can never hope to be a happy nation. Grant our supplication, we beseech thee, through Jesus Christ Our Lord. Amen"

In your own way, I encourage you to pray for our nation and its leadership.



### MEMBERSHIP

Sel Ramsay

Your Membership Chairman has a problem and is not doing a good job in solving it. So, all you readers pretend you are now the chairman and put your minds to work to find us a solution that will do what needs to be done.

When Naval Air Station Los Alamitos was a busy place flying airplanes about 50 years ago -- it was the largest Naval Air base in the United States -- there were lots of pilots and personnel involved in aviation to get together and form the Grampaw Pettibone Squadron and do things that were interesting and fun. And when the Association Of Naval Aviation was created, the Gramps group chose to join it as a chapter and have monthly lunch meetings with interesting speakers. We even hosted two national conventions for ANA in Anaheim in the 1980's. Life was good. Camaraderie, good food, and interesting program speakers made our monthly meetings good attractions for our members and friends.

Now comes trouble: We used to have 100, or so, attendees come to our lunch programs. Now we have half of that.

It Takes a larger attendance to attract good speakers and support the awards we give to the Sailors Of The Quarter we honor at the lunches. Our Flight Surgeon, Dr. Bob Helton, does his best to keep us healthy and coming to our monthly meetings, but our aging is affecting our attendance number. That's the problem. What do we do?